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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------|------------------|
| 10/501,323 | 07/15/2004 | Kensuke Fujii | 04853.0115 | 7887 |
| 22852 7590 04/12/2007 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413 | | | EXAMINER KRECK, JOHN J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3673 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/12/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/501,323 | Applicant(s) FUJII ET AL. | |
| | Examiner John Kreck | Art Unit 3673 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-7 and 10-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-7,10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/5/07 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6, 15, 16, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Rhykerd, et al. (Impact of bulking agents, forced aeration, and tillage on remediation of oil-contaminated soil).

Rykerd describes the method including adding a gas phase rate increasing inorganic soil-improving material (vermiculite, page 281, 1st paragraph); mixing by agitation, without aerating by introducing injected air (e.g. page 280, last paragraph; "tillage"), while utilizing microbes already present in the soil (page 280, second to last paragraph) as called for in claim 1.

RE claim 15: see title.

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RE claim 16: see page 280, first column, last line.

Rykerd describes the method including adding a gas phase rate increasing inorganic soil-improving material (vermiculite, page 281, 1st paragraph); mixing by agitation, without aerating by introducing injected air (e.g. page 280, last paragraph; "tillage"), and degrading utilizing microbes already present in the soil (page 280, second to last paragraph) as called for in claim 6.

RE claim 17: see title.

RE claim 18: see page 280, first column, last line.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11, 12, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhykerd.

Rhykerd lacks explicit disclosure of using the described process to treat chlorinated hydrocarbons. See, however see page 280, first sentence; where it is indicated that similar processes are useful to treat soil contaminated with trichloroethylene.

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It would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the Rhykerd process on soil contaminated with chlorinated hydrocarbons as called for in claims 11 and 13, and trichloroethylene as called for in claims 12 and 14.

4. Claims 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhykerd in view of "garden Series Basics Choosing a Soil Amendment".

Rhykerd differs from the invention claimed in claims 5 and 10 in that Rhykerd fails to describe the perlite. Rhykerd teaches vermiculite, in combination with a low clay soil (page 280, second column, third paragraph).

"Gardening" describes soil amendments for improving soil. The document teaches that perlite is useful for high clay soils in place of vermiculite. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Rhykerd process to have included perlite as called for in claims 5 and 10.

5. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhykerd, et al. (Impact of bulking agents, forced aeration, and tillage on remediation of oil-contaminated soil) in view of Glaze, et al. (U.S. Patent number 5,593,888)

Rhykerd differs from the invention claimed in claims 2 and 7 in that Rhykerd fails to teach the microbes added to the soil. Rhykerd thus fails to meet the claimed "degradation microbes are added to the contaminated soil while not being contained by

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the inorganic soil-improving material" and " the degradation microbes and the inorganic soil-improving material are separately added to the contaminated soil."

Glaze (e.g. 10:62-11:2) describes the adding of bacteria. One of ordinary skill in the art would have understood that adding specialized bacteria would have the advantage of speeding remediation of contaminants for which indigenous bacteria are deficient. Glaze (e.g. 10:36 and 29:29) also teaches separate and subsequent addition of bacteria. One of ordinary skill in the art would have understood that the bacteria would distribute better if added separately.

In light of the teachings in Glaze, it would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the Rhykerd process with microbes added to the contaminated soil while not being contained by the inorganic soil-improving material as called for in claim 2; and microbes and inorganic soil improving material separately added to the contaminated soil as called for in claim 7.

Response to Arguments

6. Applicant's arguments, filed 3/5/07, with respect to Glaze have been fully considered and are persuasive. Glaze apparently requires forced aeration: see, e.g. abstract, lines 6 and 7. The rejections based on Glaze have been withdrawn in favor of rejections based on Rhykerd.

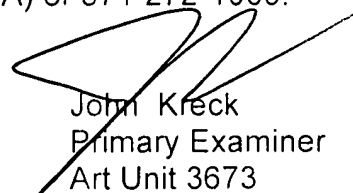
Although Glaze teaches aerating by introducing injected air, this does not negate or take away from Glaze's other teachings, see above at 5.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is 571-272-7042. The examiner can normally be reached on Mon-Thurs 530am-2pm; Fri: telework.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John Kreck
Primary Examiner
Art Unit 3673

4/10/07